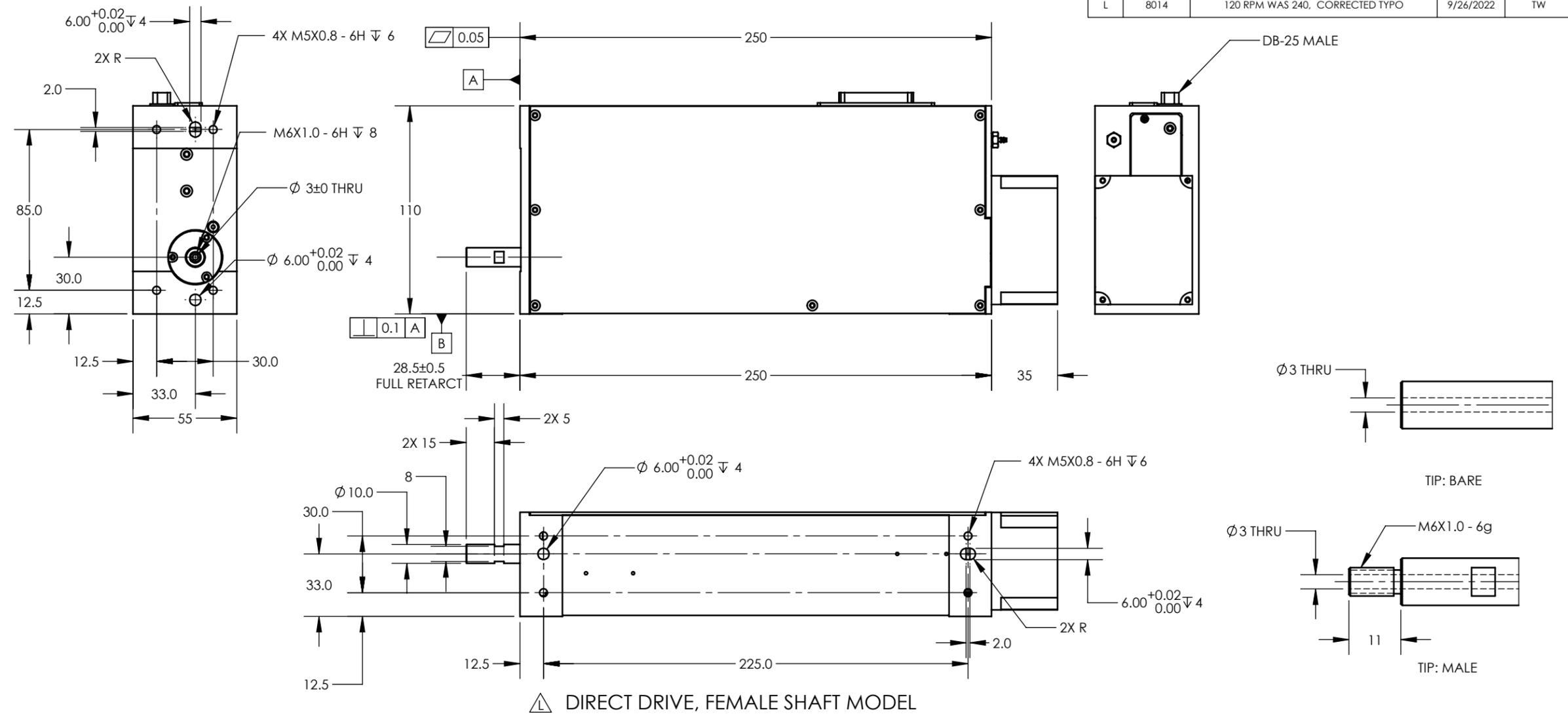


NOTES (UNLESS OTHERWISE SPECIFIED)

- 1. LINEAR SPECIFICATIONS:
 LINEAR STROKE: 100 +3/-0 mm
 ENC. RESOLUTION(+A/-A,+B/-B): 5, 1, 0.5, 0.1 um
 ENCODER REPEATABILITY: ±4 COUNT
 OPERATING VOLTAGE: 24, 48 Vdc
 COIL RESISTANCE: 15 Ohm (24Vdc)
 24 Ohm (48Vdc)
 PEAK FORCE: 16 N @ 1.6A (24Vdc)
 25 N @ 1.8A (48Vdc)
 FORCE CONSTANT: 13 N/A (24Vdc)
 17 N/A (48Vdc)
 MOVING MASS: 0.79 kg (DIRECT DRIVE)
 TOTAL MASS: 4 kg
- 2. ROTARY SPECIFICATIONS: SEE TABLE
- 3. VACUUM OPTION: N/A
- 4. SPRING OPTION: N/A
- 5. OPERATING TEMPERATURE: 0°C TO 40°C

REVISIONS				
REV	ECR	DESCRIPTION	DATE	APPROVED
J	7580	UPDATED MOTOR SPECIFICATION, REDRAWN	5/26/2021	TW
K	8010	2000 CPR WAS 20000 CPR	9/22/2022	TW
L	8014	120 RPM WAS 240, CORRECTED TYPO	9/26/2022	TW



PIN No	DB-25P
1	+5 Vdc
2	5V RTN
3	(R) MOTOR -
4	(L) PH. A-
5	NC
6	LIMIT RTN (OPTION)
7	(L) MOTOR+
8	(L) MOTOR+
9	(L) PH. B -
10	(R) MOTOR+
11	(L) LIMIT+ (OPTION)
12	(L) LIMIT - (OPTION)
13	(R) PH. B -
14	(L) PH. A+
15	(R) PH. A+
16	(L) PH. B+
17	(R) PH. B+
18	(L) PH. Z+
19	(L) MOTOR -
20	(L) MOTOR -
21	(R) PH. A -
22	(R) INDEX (COARSE)
23	(L) PH. Z -
24	(R) PH. Z+
25	(R) PH. Z -

#22: ONLY FOR GEAR MODEL

LAR55-100-5X-1

STANDARD OPTION SPEC	DIRECT DRIVE	4:1 GEAR	16:1 GEAR
ENC. RESOLUTION(+A/-A, +B/-B)	Δ 2000 CPR	4 X 2000 CPR	16 X 2000 CPR
FINE INDEX (+Z/-Z)	YES	YES	YES
MOTOR TYPE:	DC BRUSH(HANSEN 40mm)	DC BRUSH(HANSEN 40mm)	DC BRUSH(HANSEN 40mm)
PEAK TORQUE: Nm@VDC, A	0.13 Nm @ 24VDC, 2A	0.48 Nm @ 24VDC, 2A	1.8 Nm @ 24VDC, 2A
TORQUE CONSTANT: Nm/A	0.069 Nm/A	0.25 Nm/A	0.94 Nm/A
MAXIMUM SPEED: RPM	2300 RPM(WITH 0 LOAD & NON VACUUM) 500 RPM (WITH 0 LOAD & VACUUM)	500 RPM (WITH 0 LOAD)	120 RPM (WITH 0 LOAD)
GEAR BACK LASH:	N/A	LESS THAN 20 arcmin	LESS THAN 35 arcmin

LAR55-100-7X-1

STANDARD OPTION SPEC	DIRECT DRIVE	4:1 GEAR	16:1 GEAR
ENC. RESOLUTION(+A/-A, +B/-B)	Δ 2000 CPR	4 X 2000 CPR	16 X 2000 CPR
FINE INDEX (+Z/-Z)	YES	YES	YES
MOTOR TYPE:	DC BRUSH(HANSEN 40mm)	DC BRUSH(HANSEN 40mm)	DC BRUSH(HANSEN 40mm)
PEAK TORQUE: Nm@VDC, A	0.26 Nm @ 48VDC, 4A	0.96 Nm @ 48VDC, 4A	3.6 Nm @ 48VDC, 4A
TORQUE CONSTANT: Nm/A	0.069 Nm/A	0.25 Nm/A	0.94 Nm/A
MAXIMUM SPEED: RPM	4500 RPM(WITH 0 LOAD & NON VACUUM) 500 RPM (WITH 0 LOAD & VACUUM)	1000 RPM (WITH 0 LOAD & NON VACUUM) 500 RPM (WITH 0 LOAD & VACUUM)	240 RPM (WITH 0 LOAD)
GEAR BACK LASH:	N/A	LESS THAN 20 arcmin	LESS THAN 35 arcmin

UNLESS OTHERWISE SPECIFIED
 ALL DIMENSIONS ARE IN MM
 BREAK EDGES AND REMOVE BURRS
 TOLERANCES
 X: ±0.5 X.X: ±0.1
 X.XX: ±0.03 ANGLE: ±0.1°
 CONCENTRICITY: ±0.025
 ROUNDNESS: ±0.025
 EDGE BREAKS: 0.2 MAX
 ALL DIMENSIONS AND TOLERANCES ARE FINAL

MATERIAL: SEE BOM
 FINISH: SEE BOM
 MACHINE FINISH: 1.6
 INTERPRET PER: ASME Y14.5-2009
 THIRD ANGLE PROJECTION

NAME	DATE
DWN BY: TW	5/26/2021
CHK BY: TMV	5/26/2021
ENG APP: TMV	5/26/2021
MFG APP	
QA APP	

SMAC 5807 VAN ALLEN WAY
 CARLSBAD CA, 92008
 (760) 929-7588

MOVING COIL ACTUATORS

LINEAR ROTARY ACTUATOR

SIZE: B PART NO: LAR55-100-XX-1 REV: L

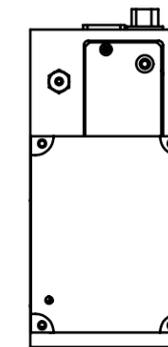
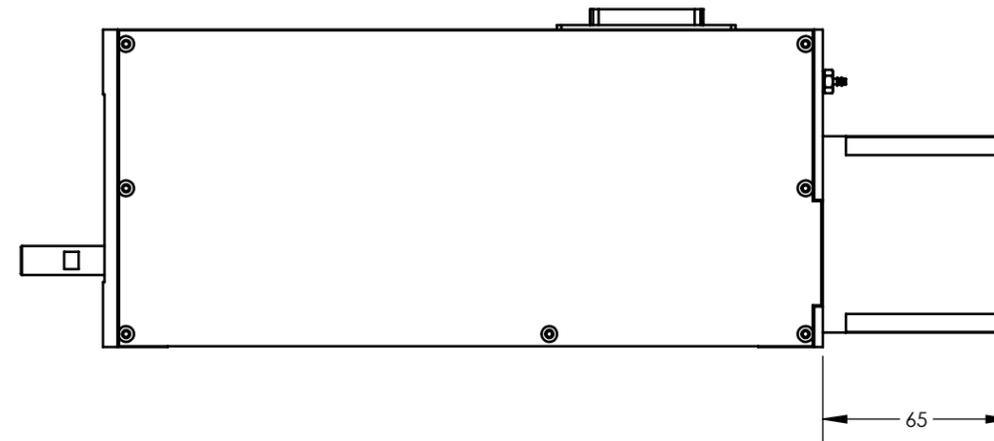
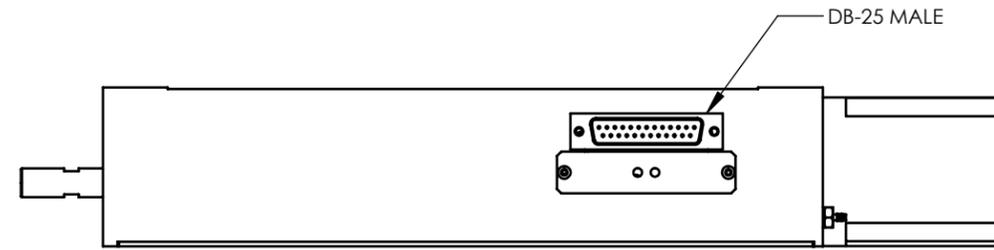
SCALE: 4:10 DO NOT SCALE SHEET: 1 / 2

4

3

2

1



4:1, 16:1 GEAR OPTION
MOUNTING HOLE LOCATION IS SAME
AS DIRECT DRIVE MODEL

SMAC
MOVING COIL ACTUATORS

5807 VAN ALLEN WAY
CARLSBAD CA, 92008
(760) 929-7588

TITLE:
**LINEAR ROTARY
ACTUATOR**

SIZE: **B** PART NO: **LAR55-100-XX-1** REV: **L**

REF. NUMBER	LAR55-100	SCALE: 4:10	DO NOT SCALE	SHEET: 2 / 2
CONTRACT	STD			

4

3

2

1

B

B

A

A